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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/652,679	08/29/2003	Brent D. Massmann	MTC 6828.1 (39-21 (52749)	2560
321 7590 07/24/2008 SENNIGER POWERS LLP ONE METROPOLITAN SQUARE 16TH FLOOR ST LOUIS, MO 63102				
EXAMINER PRYOR, ALTON NATHANIEL				
ART UNIT		PAPER NUMBER		
1616				
NOTIFICATION DATE		DELIVERY MODE		
07/24/2008		ELECTRONIC		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

uspatents@senniger.com

Office Action Summary

Application No.

10/652,679

Applicant(s)

MASSMANN ET AL.

Examiner

ALTON N. PRYOR

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 April 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-32 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-32 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SF/ICE)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Applicant's arguments filed 4/3/08 have been fully considered but they are not persuasive. See argument below.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-33 remain rejected under 35 U.S.C. 103(a) as being unpatentable over the combined teachings of Massmann et al (WO 01/08492), Chin et al (US 5070197) and Franz (US 4405531).

Massmann teaches a process for preparing a processable ammonium glyphosate paste. The process includes mixing in a reactor (i) particular glyphosate acid, (ii) ammonia in an amount of about 0.8 to about 1.25 moles per mole of the glyphosate acid, (iii) surfactant (adjuvant) and (iv) water in an amount of about 10% to about 25 % by weight of all chemicals mixed in the reactor, thereby forming an ammonium glyphosate paste composition, the total amount of water added to the reactor being from about 10% to about 25% by weight of all of the glyphosate acid, ammonia, water and adjuvant added to the reactor. A reaction between glyphosate acid and ammonia generates heat causing partial evaporation of the water and forms an ammonium glyphosate paste having a moisture content of about 5 % to about 20% by weight. Massmann teaches that the amount of ammonia ranges from about 0.95 to

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about 1.05 moles of ammonia per mole of glyphosate and that the moisture content of said ammonium glyphosate paste is from about 5 to 10% weight. Massmann teaches that the surfactant to ammonium glyphosate ratio ranges from about 1:9 to about 1:3. Massmann teaches a continuous process for preparing a dry granular ammonium glyphosate composition comprising a step of adding an adjuvant to an extrudable ammonium glyphosate mixture. See claims 1-44. Massmann does not teach the process comprising sodium hydroxide to produce sodium glyphosate. However, Chin et al teaches a process for preparing a dry water-soluble or water-dispersible pesticidal composition is prepared in a continuous process by mixing a Bronsted acid precursor of the pesticidal compound with a Bronsted base under reaction conditions in an extruder. The water in reaction volatilizes during the reaction. See abstract. Chin teaches that the pesticidal compound includes N-(phosphonomethyl)glycine and the Bronsted base includes sodium hydroxide. See column 2 line 30 – column 3 line 30. Franz exemplifies in Example 1 a combination of glycine and sodium hydroxide. It would have been obvious to one having ordinary skill in the art to replace the ammonia taught in Massmann by the sodium hydroxide taught in Chin or Franz. One would have been motivated to do this because both ammonia and sodium hydroxide are bases. Therefore, in the absence of unexpected results one having ordinary skill in the art would have replaced one base with another.

Claims 1-33 remain rejected under 35 U.S.C. 103(a) as being unpatentable over the combined teachings of Chin et al (US 5070197).

Chin teaches a process for preparing a dry water-soluble or water-dispersible pesticidal composition that is prepared in a continuous process by mixing a Bronsted acid precursor of the pesticidal compound with a Bronsted base under reaction conditions in an extruder. The water in the reaction volatilizes during the reaction. See abstract. Chin teaches that the pesticidal compound includes N-(phosphonomethyl)glycine and the Bronsted base includes sodium hydroxide. See column 2 line 30 – column 3 line 30. Chin teaches the process comprising an exothermic neutralization reaction that takes place in an extruder at a temperature sufficiently high to drive off the water formed by the reaction or the small amount of water (usually about 4 wt %. See column 1 lines 50-67). The reaction is performed in the extruder, the water of reaction being driven off by the resultant heat of reaction. See column lines 50-60. The content of water in the water soluble or water dispersible pesticidal composition is no greater than 10%. See claim 1. Chin teaches the addition of dispersants (adjuvants / surfactants) to the process. See column 4 lines 51-68. Chin does not exemplify a process comprising the glyphosate acid and sodium hydroxide. However it would have been obvious to develop such a process since Chin suggests an invention comprising glyphosate acid and sodium hydroxide. Chin does not teach the invention comprising the instant sodium hydroxide to glyphosate ratio, adjuvant to glyphosate ratio and glyphosate paste. The fact that Chin teaches that the process may comprise glyphosate, sodium hydroxide, and surfactant (adjuvant) makes it obvious that there would exist a ratio of sodium hydroxide to glyphosate and surfactant to glyphosate. In the absence of a showing of unexpected results, the instant ratios of

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ingredients are made obvious. It is a routine practice of an artisan to determine optimum ratios. With respect to the paste, it is obvious that the glyphosate product in Chin would have existed as a paste since it contains no greater than 10% water. The water content in Chin meets the limitation of the instant invention's water content of about from 2 % to about 20 %.

Response to Applicants' argument

The Applicants argue:

1. There is no motivation to replace ammonia with sodium hydroxide in the process of Massmann et al., and the Office has not identified any reasonable expectation from Chin et al. and Franz that the substitution of ammonia by sodium hydroxide would be predictable and successful. Chin et al teach that the water is evaporated from the glyphosate product (containing less than 5% water), whereas instant process yields glyphosate paste containing 10-25 % water. Franz employs sodium hydroxide in conjunction with glyphosate, but the process disclosed by Franz differs in steps from the process in instant invention.
2. Massmann et al. discourage one skilled in the art from using the disclosed process to produce a sodium glyphosate composition. The sodium glyphosate composition is disfavored as compared to ammonium glyphosate when preparing dry glyphosate formulations due the hygroscopic nature of sodium glyphosate.

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The Examiner argues:

Massmann et al. do not teach against the use of sodium salt form of glyphosate, but rather state that the sodium salt form is favorable over many other glyphosate salt forms. Massmann et al. do mention that the sodium glyphosate requires packaging with water-immermeable material to avoid the absorption of water vapor. However, nowhere in Massmann et al. is it stated that the glyphosate sodium salt should not be made and used. In fact, from the reading of Massmann et al. an artisan would be apt to make the glyphosate sodium salt over many of the other salt forms. See Massmann et al. page 3 lines 12-23. Based on this argument, Massmann et al. make the substitution of ammonia by sodium hydroxide obvious. Chin et al. and Franz are mainly provided to show that the making of the sodium glyphosate using sodium hydroxide is a common practice in the art. In fact the reference supports that the sodium salt of glyphosate is a common, predictable and effective form of glyphosate well known and used in the herbicidal art.

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

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A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1-33 remain rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-44 of U.S. Patent No. 6605568 in view of Chin et al (US. 5070197) or Franz (US 4405531).

Massmann (US '568) claims a process for preparing a processable ammonium glyphosate paste. The process includes mixing in a reactor (i) particular glyphosate acid, (ii) ammonia in an amount of about 0.8 to about 1.25 moles per mole of the glyphosate acid, (iii) surfactant (adjuvant) and (iv) water in an amount of about 10% to about 25 % by weight of all chemicals mixed in the reactor, thereby forming an ammonium glyphosate paste composition, the total amount of water added to the reactor being from about 10% to about 25% by weight of all of the glyphosate acid, ammonia, water and adjuvant added to the reactor. A reaction between glyphosate acid and ammonia generates heat causing partial evaporation of the water and forms an ammonium glyphosate paste having a moisture content of about 5 % to about 20% by weight. Massmann claims that the amount of ammonia ranges from about 0.95 to about 1.05 moles of ammonia per mole of glyphosate and that the moisture content of said ammonium glyphosate paste is from about 5 to 10% weight. Massmann claims that the surfactant to ammonium glyphosate ratio ranges from about 1:9 to about 1:3. Massmann claims a continuous process for preparing a dry granular ammonium

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glyphosate composition comprising a step of adding an adjuvant to an extrudable ammonium glyphosate mixture. See claims 1-44. Massmann does not claim the process comprising sodium hydroxide to produce sodium glyphosate. However, Chin et al teaches a process for preparing a dry water-soluble or water-dispersible pesticidal composition is prepared in a continuous process by mixing a Bronsted acid precursor of the pesticidal compound with a Bronsted base under reaction conditions in an extruder. The water in the reaction volatilizes during the reaction. See abstract. Chin teaches that the pesticidal compound includes N-(phosphonomethyl)glycine and the Bronsted base includes sodium hydroxide. See column 2 line 30 – column 3 line 30. Franz exemplifies in Example 1 a combination of glyphosate and sodium hydroxide. It would have been obvious to one having ordinary skill in the art to replace the ammonia taught in Massmann by the sodium hydroxide taught in Chin or Franz. One would have been motivated to do this because both ammonia and sodium hydroxide are bases. Therefore, in the absence of unexpected results one having ordinary skill in the art would have replaced one base by another.

Claims 1-33 remain rejected on the ground of nonstatutory obviousness type double patenting as being unpatentable over claims 1-127 of U.S. Patent No 6734142 in view of U.S. Patent No. 5070197 or U.S. Patent No 4405531.

Massmann (US '142) claims a process for preparing a processable ammonium glyphosate paste. The process includes mixing in a reactor (i) particular glyphosate acid, (ii) ammonia in an amount of about 0.8 to about 1.25 moles per mole of the glyphosate acid, (iii) surfactant (adjuvant) and (iv) water in an amount of about 10% to

about 25 % by weight of all chemicals mixed in the reactor, thereby forming an ammonium glyphosate paste composition, the total amount of water added to the reactor being from about 10% to about 25% by weight of all of the glyphosate acid, ammonia, water and adjuvant added to the reactor. The reaction between glyphosate acid and ammonia generates heat causing partial evaporation of the water and forms an ammonium glyphosate paste having a moisture content of about 5 % to about 20% by weight. Massmann claims that the amount of ammonia ranges from about 0.95 to about 1.05 moles of ammonia per mole of glyphosate and that the moisture content of said ammonium glyphosate paste is from about 5 to 10% weight. Massmann claims that the surfactant to ammonium glyphosate ratio ranges from about 1:9 to about 1:3. Massmann claims a continuous process for preparing a dry granular ammonium glyphosate composition comprising a step of adding an adjuvant to an extrudable ammonium glyphosate mixture. See claims 1-44. Massmann does not claim the process comprising sodium hydroxide to produce sodium glyphosate. However, Chin et al (US '197) teaches a process for preparing a dry water-soluble or water-dispersible pesticidal composition is prepared in a continuous process by mixing a Bronsted acid precursor of the pesticidal compound with a Bronsted base under reaction conditions in an extruder. The water in the reaction volatilizes during the reaction. See abstract. Chin teaches that the pesticidal compound includes N-(phosphonomethyl)glycine and the Bronsted base includes sodium hydroxide. See column 2 line 30 – column 3 line 30. Franz (US '531) exemplifies in Example 1 a combination of glyphosate and sodium hydroxide. It would have been obvious to one

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having ordinary skill in the art to replace the ammonia taught in Massmann by the sodium hydroxide taught in Chin or Franz. One would have been motivated to do this because both ammonia and sodium hydroxide are bases. Therefore, in the absence of unexpected results one having ordinary skill in the art would have replaced one base by another.

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ammonium glyphosate when preparing dry glyphosate formulations due the hygroscopic nature of sodium glyphosate.

The Examiner argues:

Massmann et al. do not teach against the use of sodium salt form of glyphosate, but rather state that the sodium salt form is favorable over many other glyphosate salt forms. Massmann et al. do mention that the sodium glyphosate requires packaging with water-impermeable material to avoid the absorption of water vapor. However, nowhere in Massmann et al. is it stated that the glyphosate sodium salt should not be made and used. In fact, from the reading of Massmann et al. an artisan would be apt to make the glyphosate sodium salt over many of the other salt forms. See Massmann et al. page 3 lines 12-23. Based on this argument, Massmann et al. make the substitution of ammonia by sodium hydroxide obvious. Chin et al. and Franz are mainly provided to show that the making of the sodium glyphosate using sodium hydroxide is a common practice in the art. In fact the references support that the sodium salt of glyphosate is a common, predictable and effective form of glyphosate well known and used in the herbicidal art.

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the

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shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Telephonic Inquiry

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alton N. Pryor whose telephone number is 571-272-0621. The examiner can normally be reached on 8:00 a.m. - 4:30 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Johann Richter can be reached on 571-272-0646. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Alton N. Pryor/
Primary Examiner, Art Unit 1616

